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Architectural Design Report

Background

Wollongong Hospital is a level 6 institution within NSW Health delegation, with complex medical and surgical services and high-level emergency department services.

The existing Department provides all standard diagnostic modalities including MRI, CT, angiography, ultrasound, plain films, mobile work within the wards and theatres of the Wollongong Hospital and Interventional Radiology.

The existing service currently delivers approximately 105,000 examinations per annum, of which approximately 80% are conducted within the existing Medical Imaging precinct.

The growth in utilisation of Medical Imaging and the growth in attendance at the Wollongong Emergency Department has resulted in substantial demand pressure on CT, plain radiography and ultrasound from Emergency Department patients.

All Emergency Department CT and ultrasound services are transported across the principal thoroughfare of the Wollongong Hospital in order to reach Medical Imaging from the Emergency Department, most Emergency Department plain radiography is conducted in a plain radiography room within the Emergency Department.

The proposed development aims to install an additional MRI and CT scanner for the Wollongong Hospital, as well as an additional ultrasound to service the Emergency Department and Intensive Care Unit.

This proposed acute care imaging precinct is intended to address the diagnostic imaging requirements of the emergency department of the Wollongong Hospital 24 hours a day 7 days a week.

The proposed location will permit access for CT and ultrasound services for acute care patients in theatres and ICU without crossing the principal hospital thoroughfare.

An ED ultrasound facility and a dedicated ED CT facility will reduce reliance on orderly labour and improve clinical supervision of patients through proximity to the emergency department.

Options Considered

A large number of options was considered in the design process, ranging from locating the additional MRI in the existing Medical Imaging Department, locating the additional CT Scanner in the Medical Imaging Department to locating all the additional services on a single level abutting the ED using the existing lightwell and surrounding spaces. However, it became apparent that the additional services would provide significant benefits if they were located in proximity to the ED and ICU. Review of the various options revealed that there is insufficient space to provide all the facilities on one level adjacent to the ED without significantly affecting the operation of adjacent services. For this reason, the proposal entails providing the additional CT scanning room and control room on the lower level (Level 1) of the lightwell as well as the additional ultrasound room (and patient toilet) and patient bay with the new MRI suite located directly above.



Description of Proposed Development

The proposed development consists of infilling the bottom 2 levels (Levels 1 & 2) of an existing lightwell to provide an additional CT scanning room and control room on the lower level (Level 1) of the lightwell as well as the additional ultrasound room (and patient toilet) and patient bay. The new MRI Site, consisting of preparation areas, accessible patient toilet, small dirty utility room, MRI instrument room and control room, is located directly above on Level 2. Part of the existing courtyard on Level 2 is retained to provide an outdoor space for ICU and theatre staff.

Stakeholder Engagement

The development and design of the proposal was informed by significant user input via a series of 13 Project User Group Meetings held between 3/4/24 and 28/6/24. The User Group consisted of clinical and administrative representatives from Medical imaging, Emergency Department, ICT, Infection Control, WHS, ICT and Capital Works, Refer attached sample minutes.

Interim Solution

An overall masterplan for Wollongong Hospital is currently being developed. This masterplan will incorporate the future development of the hospital to respond to the developing needs of the community over the coming decades. The proposed development is therefore considered as an interim solution for the hospital's current and near term needs. It makes the best use of the available spaces without significant impact on the hospital's operation and will result in a substantial improvement to the provision of medical imaging services for the ED and ICU.